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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,784	03/23/2004	David Harris	P-US-CS 1172	2377

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EXAMINER

TALBOT, MICHAEL

ART UNIT	PAPER NUMBER
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3722

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/806,784

Applicant(s)

HARRIS, DAVID

Examiner

Michael W. Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-18 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,4,5,10 and 12-16 rejected under 35 U.S.C. 102(b) as being anticipated by Sakamaki et al. '033. Sakamaki et al. '033 shows in Figures 1-3,5 and 6 a chuck comprising a central body (1) having a tail section (rearward end) for coupling with a driver (12) and a nose section (forward end) having a plurality of passageways angled with respect to the axis of rotation (col. 3, line 66 through col. 4, line 3) and slidably housing a plurality of jaws (4) carrying a thread and a jaw face, a nut (3) mounted on the central body and carrying a screw thread complementary to that of the jaw threads to promote slidable movement of each jaw within their respective passageway when the nut is rotated to advance and retract the jaws, and at least one bearing member (6) disposed intermediate the nut and the central body characterized in that between the nut and the central body a part-conical surface is formed such that the at least one bearing member may be displaced radially with respect to the axis of rotation of the central body. Sakamaki et al. '033 shows the displacement of the at least one bearing member results in frictional engagement between the bearing member and a portion of the chuck (1a) which is non-rotatable relative to the central body (col. 4, lines 17-19). Sakamaki et al. '033 shows the part-conical surface formed by a surface (3a) of the nut arranged to be not perpendicular to the axis of rotation of the central body. Sakamaki et al. '033 shows the central body has formed thereon a thrust plate (5) against which the at least one bearing member is able to rotate under influence of rotation of the nut and arranged to be not perpendicular to the axis of rotation of the

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central body. Sakamaki et al. '033 shows a solid line of rotation about the surface of the nut which contacts the at least one bearing member forms a cone or a frustoconical surface. Sakamaki et al. '033 shows a solid line of rotation about the surface of the thrust plate which contacts the at least one bearing member forms a cone or a frustoconical surface. Sakamaki et al. '033 shows the nut along with the central body forming the part-conical surface. Sakamaki et al. '033 shows the thrust plate along with the central body forming the part-conical surface. Sakamaki et al. '033 shows the bearing member including a plurality of rolling members in the form of balls to reduce frictional contact.

3. Claims 1-3,10,11,13,15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2113125. GB 2113125 shows in Figures 1 and 2 a chuck comprising a central body (1) having a tail section (rearward end) for coupling with a driver (page 2, lines 60-61) and a nose section (forward end) having a plurality of passageways angled with respect to the axis of rotation (page 2, lines 62-65) and slidably housing a plurality of jaws (2) carrying a thread and a jaw face (page 2, lines 64-65), a nut (3) mounted on the central body and carrying a screw thread complementary to that of the jaw threads to promote slidable movement of each jaw within their respective passageway when the nut is rotated to advance and retract the jaws, and at least one bearing member (5) disposed intermediate the nut and the central body characterized in that between the nut and the central body a part-conical surface is formed such that the at least one bearing member may be displaced radially with respect to the axis of rotation of the central body. GB 2113125 shows the displacement of the at least one bearing member results in frictional engagement between the bearing member and a portion of the chuck (Fig. 2 at interface of bearing member 5 and chuck 1) which is non-rotatable relative to the central body (page 2, lines 78-90). GB 2113125 shows the part-conical surface formed by a surface (6) of the nut arranged to be not perpendicular to the axis of rotation of the central body.

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GB 2113125 shows the part-conical surface formed by a surface (7) of the central body arranged to be not perpendicular to the axis of rotation of the central body. GB 2113125 shows a solid line of rotation about the surface of the nut which contacts the at least one bearing member forms a cone or a frustoconical surface. GB 2113125 shows a solid line of rotation about the surface of the central body which contacts the at least one bearing member forms a cone or a frustoconical surface. GB 2113125 shows the nut along with the central body forming the part-conical surface. GB 2113125 shows the bearing member including a plurality of rolling members in the form of balls to reduce frictional contact.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamaki et al. '033 in view of Huff et al. '194. Sakamaki et al. '033 lacks the at least one bearing member comprising a resilient deformable ring having a plurality of radially moveable or expanded elements pivotable about a pivot point. Huff et al. '194 shows in Figures 5A and 5B a chuck comprising at least one bearing member (48,49,50,70) comprising a resilient deformable ring (70) or a plurality of radially moveable or expanded elements (48,49) or a plurality of bearing elements pivotable about a pivot point (connection of 70 and 50 at left side in Fig. 5A). In view of this teaching of Huff et al. '194, it would have been obvious to one of ordinary skill in the art to modify the chuck Sakamaki et al. '033 to include a deformable, pivotable bearing assembly structure as taught by Huff et al. '194 to provide for great bearing capacity due to incorporating resilient members, thus enhancing the overall versatility of the chuck.

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6. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamaki et al. '033 in view of Huff et al. '461. Sakamaki et al. '033 lacks the plurality of rolling members comprising cylindrical or tapered needle bearings. Huff et al. '461 shows in Figures 5-8 a chuck comprising a bearing member having a plurality of needle bearing (90'). In view of this teaching of Huff et al. '461, it would have been obvious to one of ordinary skill in the art to replace the ball bearings of Sakamaki et al. '033 with needle bearings as taught by Huff et al. '461 to provide a greater bearing surface area for an equivalent ball bearing diameter, thus provides for shortening the axial length of the chuck due to its geometry (col. 6, lines 44-58).

7. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2113125 in view of Huff et al. '194. GB 2113125 lacks the at least one bearing member comprising a resilient deformable ring having a plurality of radially moveable or expanded elements pivotable about a pivot point. Huff et al. '194 shows in Figures 5A and 5B a chuck comprising at least one bearing member (48,49,50,70) comprising a resilient deformable ring (70) or a plurality of radially moveable or expanded elements (48,49) or a plurality of bearing elements pivotable about a pivot point (connection of 70 and 50 at left side in Fig. 5A). In view of this teaching of Huff et al. '194, it would have been obvious to one of ordinary skill in the art to modify the chuck GB 2113125 to include a deformable, pivotable bearing assembly structure as taught by Huff et al. '194 to provide for great bearing capacity due to incorporating resilient members, thus enhancing the overall versatility of the chuck.

8. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2113125 in view of Huff et al. '461. GB 2113125 lacks the plurality of rolling members comprising cylindrical or tapered needle bearings. Huff et al. '461 shows in Figures 5-8 a chuck comprising a bearing member having a plurality of needle bearing (90'). In view of this teaching of Huff et al. '461, it would have been obvious to one of ordinary skill in the art to replace the ball

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bearings of GB 2113125 with needle bearings as taught by Huff et al. '461 to provide a greater bearing surface area for an equivalent ball bearing diameter, thus provides for shortening the axial length of the chuck due to its geometry (col. 6, lines 44-58).

Allowable Subject Matter

9. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed 08 November 2006 have been fully considered but they are not persuasive.

11. Examiner respectfully disagrees with Applicant's assertion that the references do not have "at least one bearing member disposed intermediate a nut and a central body where radial displacement of the bearing member results in frictional engagement between the bearing member and "a portion of the chuck which is non-rotatable relative to the central body".

Sakamaki et al. '033 clearly shows the displacement of the at least one bearing member (6) results in frictional engagement between the bearing member and a portion of the chuck (1a) which is non-rotatable relative to the central body (col. 4, lines 17-19).

GB 2113125 clearly shows the displacement of the at least one bearing member (5) results in frictional engagement between the bearing member and a portion of the chuck (Fig. 2 at interface of bearing member 5 and chuck 1) which is non-rotatable relative to the central body (page 2, lines 78-90).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mrs. Monica S. Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

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would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MWT
Examiner
16 January 2007


MONICA CARTER
SUPERVISORY PATENT EXAMINER